

Exhibit

A-4

Notice of Allowability	Application No.	Applicant(s)	
	11/027,265	WANG ET AL.	
	Examiner	Art Unit	
	Shawn S. An	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 9/14/05.
2. ☒ The allowed claim(s) is/are 1-19.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date <u>12/30/04</u> 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____ |
|---|---|

Application/Control Number: 11/027,265
Art Unit: 2621

Page 2

EXAMINER'S AMENDMENT

I. An Examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to Applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

IN THE CLAIMS:

A) Please amend claims 1, 4, 7-8, 14, and 19 as follows:

1. (Currently Amended) A method of encoding a picture in an image sequence, comprising:

dividing said picture into a plurality of smaller portions, wherein each of said smaller portions has a size that is larger than one macroblock;

selectively encoding at least one of said plurality of smaller portions at a time in frame coding mode and at least one of said plurality of ~~small~~ smaller portions at a time in field coding mode; and

selectively encoding at least one block within at least one of said plurality of smaller portions at a time in inter coding mode.

4. (Currently Amended) An apparatus for encoding a picture in an image sequence, comprising:

means for dividing said picture into a plurality of smaller portions, wherein each of said smaller portions has a size that is larger than one macroblock;

means for selectively encoding at least one of said plurality of smaller portions at a time in frame coding mode and at least one of said plurality of ~~small~~ smaller portions at a time in field coding mode; and

Application/Control Number: 11/027,265
 Art Unit: 2621

Page 3

means for selectively encoding at least one block within at least one of said plurality of smaller portions at a time in inter coding mode.

7. (Currently Amended) A computer-readable medium encoded with computer executable instructions ~~having stored thereon a plurality of instructions~~, the plurality of computer executable instructions including instructions which, when executed by a processor, cause the processor to perform the steps of a method for encoding a picture in an image sequence, comprising the steps of:

dividing said picture into a plurality of smaller portions, wherein each of said smaller portions has a size that is larger than one macroblock;

selectively encoding at least one of said plurality of smaller portions at a time in frame coding mode and at least one of said plurality of ~~small~~ smaller portions at a time in field coding mode; and

selectively encoding at least one block within at least one of said plurality of smaller portions at a time in inter coding mode.

8. (Currently Amended) A method of decoding an encoded picture having a plurality of smaller portions from a bitstream, comprising:

decoding at least one of said plurality of smaller portions at a time in frame coding mode and at least one of said plurality of smaller portions at a time in field coding mode, wherein each of said smaller portions has a size that is larger than one macroblock, wherein at least one block within said at least one of said plurality of smaller portions at a time is encoded in inter coding mode; and using said plurality of decoded smaller portions to construct a decoded picture.

14. (Currently Amended) An apparatus for decoding an encoded picture from a bitstream, comprising:

means for decoding at least one of said plurality of smaller portions at a time of the encoded picture that is encoded in frame coding mode and at least one of said plurality of smaller portions at a time of the encoded picture in field coding mode,

Application/Control Number: 11/027,265
Art Unit: 2621

Page 4

wherein each of said smaller portions has a size that is larger than one macroblock, wherein at least one block within at least one of said plurality of smaller portions at a time is encoded in inter coding mode; and

means for using said plurality of decoded smaller portions to construct a decoded picture.

19. (Currently Amended) A bitstream comprising:

a picture that has been divided into a plurality of smaller portions, wherein at least one of said plurality of smaller portions at a time is encoded in frame coding mode and at least one of said plurality of smaller portions at a time is encoded in field coding mode, wherein each of said smaller portions has a size that is larger than one macroblock, and wherein at least one block within at least one of said plurality of smaller portions at a time is encoded in inter coding mode.

REMARKS:

Claims 1, 4, 7-8, 14, and 19 have been amended as discussed above, as authorized by Applicant's attorney, Larry T. Cullen (44,489) on June 21, 2007.

II. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to *Shawn S. An* whose telephone number is 571-272-7324.


SHAWN AN
PRIMARY EXAMINER

6/23/07

Application/Control Number: 11/027,265
Art Unit: 2621

Page 5

Reasons for Allowance

1. Claims 1-19 are allowed after entering the Examiner's Amendment as discussed in the EXAMINER'S AMENDMENT section.

2. **Claims 1-7** are allowed as having incorporated novel features comprising an apparatus/method/computer process for encoding a picture in an image sequence comprising:

means for dividing said picture into a plurality of smaller portions, wherein each of said smaller portions has a size that is larger than one macroblock;

means for selectively encoding at least one of said plurality of smaller portions at a time in frame coding mode and at least one of said plurality of smaller portions at a time in field coding mode; and

means for selectively encoding at least one block within at least one of said plurality of smaller portions at a time in inter coding mode.

Claims 8-18 are allowed as having incorporated novel features comprising an apparatus/method for decoding an encoded picture comprising:

means for decoding at least one of said plurality of smaller portions at a time of the encoded picture that is encoded in frame coding mode and at least one of said plurality of smaller portions at a time of the encoded picture in field coding mode, wherein each of said smaller portions has a size that is larger than one macroblock, wherein at least one block within at least one of said plurality of smaller portions at a time is encoded in inter coding mode; and

means for using said plurality of decoded smaller portions to construct a decoded picture.

Claim 19 is allowed as having incorporated novel features comprising a bitstream comprising:

a picture that has been divided into a plurality of smaller portions, wherein at least one of said plurality of smaller portions at a time is encoded in frame coding mode

Application/Control Number: 11/027,265
Art Unit: 2621

Page 6

and at least one of said plurality of smaller portions at a time is encoded in field coding mode, wherein each of said smaller portions has a size that is larger than one macroblock, and wherein at least one block within at least one of said plurality of smaller portions at a time is encoded in inter coding mode.

The prior art of record fails to anticipate or make obvious the novel features (emphasis added on underlined claim(s) limitations) as specified above.

Any comments considered necessary by Applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. The prior art made of record is considered pertinent to Applicant's disclosure.
 - A. Obikane et al (5,504,530) Apparatus and method for coding and decoding image signals.
4. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to *Shawn S. An* whose telephone number is 571-272-7324.
5. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.
6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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6/23/07